



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/531,813

04/18/2005

Takashi Nakai

09864/0202607-US0

3685

7278

7590

04/02/2009

DARBY & DARBY P.C.

P.O. BOX 770

Church Street Station

New York, NY 10008-0770

EXAMINER

BELL, WILLIAM P

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

04/02/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/531,813	<b>Applicant(s)</b> NAKAI ET AL.	
	<b>Examiner</b> WILLIAM P. BELL	<b>Art Unit</b> 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1, 15, 16, 20 and 21 is/are pending in the application.
- 4a) Of the above claim(s) 20 and 21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 15 and 16 is/are rejected.
- 7) ☒ Claim(s) 1 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. Examiner appreciates Applicant's notation that the only reference listed in the specification was cited in an Information Disclosure Statement filed on 18 April 2005. Said Information Disclosure Statement was reviewed, initialed, and signed in the Office action dated 17 September 2008. If Applicant did not receive a copy of this document with that action, Examiner would be happy to supply a copy upon request, or Applicant can retrieve a copy directly from the Patent Application Information Retrieval (PAIR) system as discussed at the end of this action.

### ***Claim Objections***

2. Claim 1 is objected to because of the following informalities: the word "power" in line 7 of the claim appears to be a typographical error. Examination will be based on the assumption that "power" should read as --powder--. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 1791

4. Claims 1 and 16 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kondo (European Patent Application No. EP-1170075). Regarding claim 1, Kondo teaches a method for forming a compact from a powder (see [0012]), comprising the steps of: applying a solution obtained by dissolving a lubricant in a solvent to a forming portion of a mold body (see [0050]-[0052]); evaporating the solution to form a layer of the lubricant on a surface of the forming portion (see [0055]); filling the forming portion of the mold body with a raw powder (see [0058]), said raw powder being Fe-based metal powder or Cu-based metal powder (see [[0058]-[0059]); and then fitting upper and lower punches into the forming portion (see [0052]-[0054]; one of skill in the art knows that inserting upper and lower punches into "an ordinary die for forming a compact in the field of powder metallurgy" is a prerequisite step for applying compaction pressure to the powder). While Kondo does not explicitly list one of the lubricants listed by Applicant, he does state that the lubricants can be "composed of metal salts of higher fatty acid" and recites several metal salts of stearic acid as examples (see [0039]). Since there are only a limited number of metals, Kondo anticipates the use of sodium stearate as a lubricant, or in the alternative it would be obvious to do so. Sodium stearate is known to be soluble in water and to crystallize upon evaporation of the water from an aqueous solution, thus forming a crystallized layer on the mold surface (see [0055]). Kondo teaches that, when applying the lubricant to an inner surface of a die, the lubricant should be diluted to a level of 0.1 to 5% by weight of the lubricant in the total weight of the diluted aqueous solution (see [0050]). This concentration range covers, at least in part, the range of

Art Unit: 1791

concentrations between that of a saturated solution and that at which a crystallized layer of one molecule of the lubricant is formed.

Regarding claim 16, Kondo teaches a method wherein a defoaming agent is added into the lubricant (see [0047]).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kondo as applied to claim 1 above, and further in view of Murata (International Patent Application Publication No. WO 97/48783). Kondo does not teach a lubricant comprising an antiseptic substance. In the analogous art of lubricating solutions for metal working, Murata teaches the use of a "preservative" in waterborne lubricants (see page 7, lines 18-22). A preservative can be reasonably interpreted as equivalent to an antiseptic in that both serve to prevent growth of unwanted organisms such as molds, bacterial, etc. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the lubricant taught by Kondo with the preservative taught by Murata for the benefit of providing a lubricant solution with a long shelf life.

***Response to Arguments***

7. Applicant's arguments, see page 5, filed 16 January 2009, with respect to the specification have been fully considered and are persuasive. The objection of 17 September 2008 has been withdrawn.

8. Applicant's arguments filed 16 January 2009 have been fully considered but they are not persuasive. Applicant argues that Kondo does not disclose a crystallized layer formed on a surface of the forming portion of the mold to which the lubricant is applied. (page 6), but later states that the listed water soluble lubricants do form such a crystallized layer. As discussed above, Kondo anticipates the use of one of the listed water soluble lubricants, sodium stearate (or in the alternative it would be obvious to use sodium stearate based on Kondo's disclosure). Applicant also argues that the lubricant disclosed by Kondo is not completely dissolved in water in less than the concentration of a saturated solution so as to be in a uniform phase, but again later states that the listed water soluble lubricants do dissolve in water. Kondo anticipates the use of one of the listed water soluble lubricants, and discloses concentration ranges which would be less than that of a saturated solution.

9. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection and Applicant's amendment. Applicant argues that the references cited in the rejections in the previous Office action disclose different uses from that of the instant invention and cannot be applied to the claim as amended. This argument is moot, since the references were cited in rejections of claims which did

Art Unit: 1791

include the limitation that the lubricants were to be used in the forming of a compact from Fe-based or Cu-based metal powders.

10. Applicant's arguments, see page 11, filed 16 January 2009, with respect to claims 1-11 and 13-19 have been fully considered and are persuasive. The provisional rejection of these claims on the ground of nonstatutory double patenting of 17 September 2008 has been withdrawn.

### ***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM P. BELL whose telephone number is

Art Unit: 1791

(571)270-7067. The examiner can normally be reached on Monday - Thursday, 8:00 am - 5:30 pm; Alternating Fridays, 8:00 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

wpb

/Richard Crispino/  
Supervisory Patent Examiner, Art Unit 1791